

# PRE-TRAINING HUMAN RESOURCES IN ROMANIAN PUBLIC ADMINISTRATION IN THE NEW KNOWLEDGE-BASED ECONOMY USING ELECTRONIC COMMUNICATION

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## Rezumat

Prezenta lucrare este structurată în două părți: prima parte prezintă o abordare teoretico-metodologică privind sistemele de instruire prin tehnici electronice de comunicație iar în cea de a doua parte sunt prezentate contribuțiile aplicative personale pentru dezvoltarea unui sistem avansat de instruire.

Am realizat o sinteză a studiilor și cercetări personale întreprinse în definirea, elaborarea modelului conceptual și teoretizarea noțiunii de sistem avansat de instruire prin utilizarea tehnicilor electronice de comunicații, precum și a rapoartelor privind stadiul actual al sistemelor de e-Learning. Lucrarea cuprinde și o descriere a aplicațiilor dezvoltate pentru un prototip de sistem avansat.

**Cuvinte Cheie:** iLearning, managementul cunoștințelor, tehnici fuzzy, platforme electronice de instruire

## Abstract

The paper is structured in two parts: first part presents theoretical and methodological approaches concerning the advanced instruction systems by using electronic communication techniques and the second part contains applicative contributions regarding the achievement of an advanced instruction system by using electronic communication techniques.

In the first think a synthesis has been made, comprising studies and researches related to the definition, the elaboration of the conceptual model and the theorization of the advanced instruction system notion by using electronic communication techniques, as well as reports concerning the present state of e-Learning systems, in view of turning to advanced instruction systems by using electronic communication techniques.

**Keywords:** iLearning, Knowledge Management, Information Technologies and Communication Platforms for Training, Fuzzy Techniques,

**JEL Classification:** D83, M15, I21

## 1. INTRODUCTION

While before December 1989 the educational ideal of the Romanian society was creating a "multilaterally developed" human being, able to respond to the political, social and economic demands, the change in the international policy has imposed changing the educational ideal, as well. Thus, in the period 1990 – 1996, the new political regime in our country has correlated the educational ideal with the openness obtained as a consequence of the change. According to the educational theories of the time, the desirable educational ideal was to create a plurivalent individual who'd be able to easily adjust and integrate to the political, economic and social environment, found in transition.

The year 1996 brings a new change in the Romanian policy. Including Romania on the international market and finding access fields became a priority. The idea of the business environment according to which the division of labor and the entrepreneurs' specialization would allow a fast and sustained development of certain fields has been accepted. The educational ideal adapted to this challenge and the US model was adopted as the economic growth model to be followed. Changes have been brought to the educational ideal's definition, in order to fit with the new requirements. During 1996-2007, preparing highly-trained specialists, able to face competition, was a national priority. Therefore, major changes have come up in the educational program, at the level of instruction methodologies. In primary education, there were introduced distinctions on subjects while the awards have been removed. No more competition was desirable amongst children, until they were outlined and developed with certain skills, abilities and habits in a well-defined field. The branches of knowledge have been subordinated to curricular areas. They had the mission of delimitating the instruction and research horizon in order to consequently allow identification of the professions the students would follow. Until 2004, curricular areas and alternative manuals have been introduced for the entire primary and gymnasium education, and 2007 commenced with the completion of the change process in all pre-academic education (Diaconu & Jinga, 2004).

Alongside Romania's integration in the European Union on January 1<sup>st</sup>, 2007, the extended labor market imposed new rules and extreme caution. It is not to be neglected the fact that, starting January 1<sup>st</sup>, 2007, the European Union is a community that gathers 27 member states and a population of 492,8 million inhabitants, having 23 official languages. The educational ideal had to be adjusted to the new political, social and economic climate. Its definition hasn't proved to be easy to find, at all. For each historical stage, the ideal squared with the human type that was desirable for that period, with various consequences on the long run. No-one was willing anymore to sacrifice generations without taking into account its lasting development. For the first time, it has come up the assessment of the political

decision's risk in defining the educational ideal. Educational plurivalence was bringing about a series of benefits related to the rapid integration on the labor market, but at lower levels, while the excessive specialization and improvement were causing the organizational performance negative consequences on social and personal level and also rather high expenses for professional reconversion in those sectors which were decreasing or ceasing their activity. A compromise solution was found: *creation of a human being who would be fit and well-prepared for an unknown world, who'd be able to assume the risks of his decisions and actions.*

*In first part, entitled "PRE-TRAINING HUMAN RESOURCES IN ROMANIAN PUBLIC ADMINISTRATION IN THE NEW KNOWLEDGE-BASED ECONOMY", I've identified and defined the extension area of the current instruction systems as well as the elements that rationally justify the organization and institutionalization of the instructive-educational process in the new economy based on knowledge which is focused on continuous, personalized learning, accorded to the user. Consequently to documentation, I have identified certain features that manifest in the contemporary society, mainly determined by economic globalization and intense external competition.*

*One first feature is given by the new concept termed „Economy based on knowledge”, founded on three elements: innovation, informational society and human capital.*

*A second feature is given by the six contradictions that are manifest during instruction:*

- the contradiction between the period of time when the individual has the quality of instruction object and the duration of his being object of his own activity;
- the contradiction between the time assigned for documentation, for identification of knowledge sources and the time assigned for the assimilation and processing of the acquired knowledge;
- the contradiction related to the increasing gap between the evolution of the students' information demands and the diversification of the information possibilities;
- the contradiction between the natural logic of the instruction branches' sequence and their recovery in the education programs;
- the contradiction between the need for instruction's individualization and the mass character of permanent instruction, and
- the contradiction between concepts, practices and systems that are used in the instruction process.

A *third feature* is given by **the educational ideal's role in a nation's well-being**. While before December 1989 the educational ideal of the Romanian society was creating a "multilaterally developed" human being, able to respond to the political, social and economic demands, the change in the international policy has imposed changing the educational ideal, as well. Thus, in the period 1990 – 1996, the new political regime in our country has correlated the educational ideal with the openness obtained as a consequence of the change. According to the educational theories of the time, the desirable educational ideal was to create a plurivalent individual who'd be able to easily adjust and integrate to the political, economic and social environment, found in transition. The year 1996 brings a new change in the Romanian policy. Including Romania on the international market and finding access fields became a priority. The idea of the business environment according to which the division of labor and the entrepreneurs' specialization would allow a fast and sustained development of certain fields has been accepted. The educational ideal adapted to this challenge and the US model was adopted as the economic growth model to be followed. Changes have been brought to the educational ideal's definition, in order to fit with the new requirements. During 1996-2007, preparing highly-trained specialists, able to face competition, was a national priority. Therefore, major changes have come up in the educational program, at the level of instruction methodologies. In primary education, there were introduced distinctions on subjects while the awards have been removed. No more competition was desirable amongst children, until they were outlined and developed with certain skills, abilities and habits in a well-defined field. The branches of knowledge have been subordinated to curricular areas. They had the mission of delimitating the instruction and research horizon in order to consequently allow identification of the professions the students would follow. Until 2004, curricular areas and alternative manuals have been introduced for the entire primary and gymnasium education, and 2007 commenced with the completion of the change process in all pre-academic education. Alongside Romania's integration in the European Union on January 1<sup>st</sup>, 2007, the extended labor market imposed new rules and extreme caution. It is not to be neglected the fact that, starting January 1<sup>st</sup>, 2007, the European Union is a community that gathers 27 member states and a population of 492,8 million inhabitants, having 23 official languages. The educational ideal had to be adjusted to the new political, social and economic climate. Its definition hasn't proved to be easy to find, at all. For each historical stage, the ideal squared with the human type that was desirable for that period, with various consequences on the long run. No-one was willing anymore to sacrifice generations without taking into account its lasting development. For the first time, it has come up the assessment of the political decision's risk in defining the educational ideal. Educational plurivalence was bringing about a series of benefits related to the rapid integration on the labour market, but at lower levels, while the excessive specialization and improvement were causing the organizational performance negative consequences on social and personal level and also rather

high expenses for professional reconversion in those sectors which were decreasing or ceasing their activity. A compromise solution was found: *creation of a human being who would be fit and well-prepared for an unknown world, who'd be able to assume the risks of his decisions and actions.*

The fourth feature is given by **the contemporary educational models**, results of the educational ideal. Being developed in accordance to the educational ideal that was defined in the respective period, the educational models can be grouped in three important categories: *the individual, the sociocratic and the creative model*. Some authors (Diaconu and Jinga, 2004) deem these models are in a conflict. The grounds of this conclusion are presented in paper's content. I also mention that other authors specify that the sole activities bringing surplus value to the society are the creative activities. Synergetic actions, activities deployed in view of achieving certain objectives or other types of activities are susceptible of the reference criteria interpretations: performance, efficiency, efficacy, volume, etc.

In *second part* entitled „*PARTICULARITIES OF THE ELECTRONIC INSTRUCTION SYSTEMS ACKNOWLEDGED UNDER THE GENERIC NAME OF E-LEARNING*”, I've identified and isolated the concept of e-Learning through the perception of those who study the field of electronic instruction, researchers who expressed a point of view in the specialized literature but also practitioners who, with or without defining the notion, have developed such systems. Defining the concept has proved to be rather difficult. While in 1993, Graziadei, W. D biology teacher at the New York University was coordinating the project „Teaching and Learning via The Network - Virtual Instructional Classroom Environment in Science (VICES)” in the attempt of describing the advantages of delivering content via e-mail and online (Graziadei, 1993). Reading, nowadays, the e-Learning concept can be found, by a simple interrogation of an Internet searching electronic engine, in millions of articles (GOOGLE: over 45.000.000, YAHOO: 69.800.000, LIVE SEARCH: 3.100.000). Unfortunately, in the Romanian public libraries there are less than 20 titles in foreign languages and 4 in Romanian (National Library: 18 in English and 4 in Romanian, Central University Library: 15 titles amongst which 4 in Romanian, Central Library of the Bucharest Academy of Economic Studies: no titles).

A shortcoming of the e-Learning concept can be also represented by the apparition of derived concepts, such as iLearning (instruction mediated by internet), m-Learning (instruction mediated by mobile communication equipments), v-Learning (virtual instruction), g-Learning (game instruction), u-Learning (depending on the individual instruction need), etc. There are voices claiming that the apparition of new notions could signify the fact that e-Learning is conceptually obsolete, but others consider that the electronic instruments family with instruction purpose gets to complete the perception horizon of the e-Learning concept (Istrate, 2002). No matter how would we call this phenomenon, of instruction mediated

by informational and communication technologies, it is certain that at present there is a multitude of models and forms of electronic instruction, which are detailed in the content of chapter II. Within the chapter, I have also presented some of the most well-known systems of e-Learning, developed by specialized soft companies, but in *opensource* system as well. Some of these systems are being used in over 200 countries, ensuring the instruction support for over 600000 users. Afterwards we presents a series of factors that influence e-Learning. These major factors have been identified as a result of a SWOT analysis of the present stage of the organizations that arrange instruction by using electronic communication techniques, as well as of the environment where they carry out their activity. The analysis performed at the Bucharest Academy of Economic Studies, and at Universities in the country as well (Bucharest Polytechnics University, Carol I National Defense University, SNSPA, Bucharest University) and abroad (D'Artois University – France) has led to the identification of issues that justify the process of improving the traditional instruction systems, amongst which we mention the following:

- non-correlation between instruction processes and the dynamics of the technical-scientific progresses;
- impossibility of acknowledging in due time, at different instruction levels, of the instruction need, according to the individual's psycho-physical features and to the social, economic and political environment he belongs to, as well;
- lack of information for the political or economic decision factors regarding the instruction level of the population's various categories;
- inexistence at the level of communities organizing instruction of an informational and communication infrastructure that would allow obtaining in due time the necessary information for the achievement of certain detailed social, economic or political analyses;
- absence of the integrated instruction systems which would allow both control in real time of the instruction-educational process, and its correlation with the actual consumptions of human, material, financial or time resources;
- non-use of efficient instruments for the substantiation and dynamic pursue of the instruction level's evolution per individual in order to be able to make a valuable reasoning regarding the existing human resources fund at a certain moment in time;
- non-use of tools with forecasting character in the direction of the instruction-educational activities, which would allow aprioristic knowledge, with a satisfactory probability, of the evolution of certain quantitative and qualitative indicators related to the instruction level and



testing the hypothesis that it could exist a relationship between the instruction level and a nation's well-being;

- lack of a unitary informational system at organizations' level, that would allow grasping the existing interdependencies between the economic activities and the instruction degree of the used human resource, during their functioning.

In addition to these issues, there is a series of requirements which could be satisfied by various action manners, presented in this chapter. In order to select the most appropriate means, we deem necessary to also take into account the social impact, the financial and educational motivation that will contribute to a unitary perception regarding the quality of the e-Learning system, in fact, Liu and Hwang, (2009) as suggested in the paper *A key step to understanding paradigm shifts in e-learning: towards context-aware ubiquitous learning*.

## 2. CONCLUSIONS

This paper, entitled "PRE-TRAINING HUMAN RESOURCES IN ROMANIAN PUBLIC ADMINISTRATION IN THE NEW KNOWLEDGE-BASED ECONOMY USING ELECTRONIC COMMUNICATION" is a synthesis of the fundamental research presented in first part, wherefrom it has resulted a new concept of electronic instruction System called iLearning+. In order to outline and define this concept, I have resorted to the support of the Management Faculty's students, from Bucharest Academy of Economic Studies, by involving them in the project iLearningWiki, available online at the site [www.moodle.ase.ro](http://www.moodle.ase.ro). Assuming the risk we do specify that a similar project has been developed by professor Elliot Masie. He published in the summer of 2004 a digital book called '701 e-Learning tips', this book being available online, free for consultation (Masie, 2004). At first, in order to identify and delimit the common research horizon, we had proposed ourselves to comment and/or paraphrase the informational content of the book '701 e-Learning tips'. Finally, we have reached the point where to present 246 characteristics of the *iLearning* notion, thus being determined to assume the risk of defining a new concept, *iLearning+*, which nominates an *advanced instruction System by using electronic communication techniques*. In the *second part*, I have presented general features and main functionalities which, in our perception, are the minimum necessary for the delimitation of this concept from another concepts, such as e-Learning, Blended Learning, Master Learning, Lifelong Learning, etc.

For testing these functionalities in practice, I have implemented an e-Learning System, available online at the site [www.moodle.ase.ro](http://www.moodle.ase.ro), system that I used as support in the seminary activities carried out with the students in the first grade, at Management Faculty, at the discipline e-Organization Systems and

with the first and third grade, at Management Faculty, Specialization Public Administration at the disciplines Communication's Technology in Public Administration, respectively e-Services Systems Platform moodle.ase.ro is registered in the Moodle database and can be viewed through the portal and Moodle in its opening page *Welcome to the Moodle community!* (n.d.) retrieved April 21, 2009, from <http://www.moodle.org/community> [Fictional entry.]

Once being identified this system's limitations, in transition towards the advanced instruction System by using electronic communication techniques, I have used combined Instruction (Blended Learning). The novelty of the *advanced System* resides in the introduction of new, original modules, compatible with the existing ones, which would allow electronic files' administration basing on knowledge and by using computer-assisted methods for the quantification of the instruction process' results.

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